

ABSTRACT

A method for fabricating a strained silicon film to a silicon on insulation (SOI) wafer. A layer of oxide is deposited onto a wafer that has a stack structure of a first base substrate, a layer of relaxed film and a second layer of strained film. The SOI wafer has a stack structure of a second base substrate and a layer of oxidized film. The SOI wafer is attached to the wafer and is heated at a first temperature. This causes a silicon dioxide ( $\text{SiO}_2$ ) dangling bond to form on the second base substrate of the SOI wafer, transferring the strained film from one wafer to the other.